

Thinking beyond the Books

Sociological Biases of Our Military Institutions

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Professional military reading lists have expanded in recent years so that now nearly every senior organizational seat or position presents some recommended series of books or articles. As institutions, most militaries have reading lists for various groups and audiences as a means of fostering professional development and improving organizational knowledge. This article focuses on the American military (US Air Force and US Army) since that institution continues to exert significant international influence across the greater military profession. For the Air Force and Army, diverse reading lists tend to encourage positive narratives on academic development with subtle additional devices designed for nurturing a particular institutional legacy.

For militaries to be a profession, they require the continuous exchange of ideas and growth of new concepts, language, and emergent forms. Older, outdated, and unpopular ideas and language are discarded while some ideas retain important symbolic and institutionally self-relevant statuses that tend to cement them into our organization. Thus, every military library now possesses the familiar piles of books and a printed sheet listing the latest favorites for institutional consumption. But to what ends—and, more importantly, how—do we expect institutional development to occur beyond “reading books (and other media) deemed valuable to us”?

Any book list is potentially useful, but the value of a single book (or concepts within it) becomes a rather biased and frustrating process about which we might argue relentlessly on whether *On War* should be read by all commissioned lieutenants or perhaps how *Zen and the Art of Motorcycle Maintenance* ought to be reinserted into the required reading curriculum of the US Army’s School of Advanced Military Studies.¹ Instead of debating over this book or that, this article presents a broader discussion that looks above books entirely. We need to consider how the military as an overarching profession thinks (socially established ways of perception) and how we tend to practice self-referential maintenance of how we think by selecting certain types of books (as well as lists, videos, and other media) and excluding others. We exercise selective knowledge production, yet the deeper organizational reasons for which we do so often escape us.

To illustrate the implicit manner by which we often go about selecting reading lists, we examine the 2014 professional reading lists of the Army and Air Force chiefs of staff and frame the selections within a holistic and sociological approach that gives pause for reflecting upon our institutions.² We use these reading lists only because of their prominence within the established military hierarchy and the strong representation they offer to other associated and similar lists. Potentially, these annual American military reading lists may have no significant effect upon other militaries although more research is needed to explore that possibility. The 2015 and perhaps 2016 lists also came out during the publication timeline of this article, but they will undoubtedly follow the 2014 model and previous ones. We tend to repeat the same actions year after year, expecting different results.

Taking a sociological and at times abstract philosophical approach, this article finds that our book lists tell us more about how our Air Force and Army socially construct institutional perceptions of reality. Furthermore, some book lists might actively champion one singular way of thinking at the expense of all others.³ We essentially see an organization steering towards a single way of interpreting reality with all associated reading recommendations subjugated within that paradigm. For strategic thinking and critical institutional reflection, we first need to discuss the notion of paradigms and paradigm blindness. We must get “above the books” and think about rather abstract and implicit (invisible) forces within our organizations.

Burrell and Morgan: Paradigms Shaping Entire Social Frames for Reality

Had the Marx brothers wanted to dissuade academics from using the term *paradigm*, Groucho might have quipped, “Your paradigm’s worth 20 cents.” Acknowledging this notion up front, the term *paradigm* is both misunderstood and overused in modern military discussions. Yet, the importance of paradigms within sociology, philosophy, and science might be one of the most influential debates of the twentieth century—one that continues today. A paradigm is “the broadest unit of consensus within a science and serves to differentiate one scientific community from another. It subsumes, defines, and interrelates the exemplars, theories, methods and instruments that exist within it.”⁴ Although the more cited concepts of paradigms by Thomas Kuhn offer framing that tilts towards quantitative approaches, this article applies George Ritzer’s more sociologically inclined framing for paradigms.⁵

The article draws from the paradigm theories proposed by Gibson Burrell and Gareth Morgan since their sociological impact uniquely relates to organizational and social constructions of reality. Their four-paradigm heuristic construct also inspires the reading-list exploration as well as suggested solution frames.⁶ Their collective work and the efforts of recent organizational theorists work off variations of Burrell and Morgan’s original four-paradigm model established with the tensions among objectivity, subjectivity, stability, and radical transformation. Paradigms are inescapable—all humans use some sort of paradigm, and often groups or societies of humans share dominant paradigms that continuously reinforce their own particular (and exclusive) way of making sense of how the world is—and *ought to be*.

Using two tensions, figure 1 illustrates the dichotomy of these four concepts that create the quadrants in which paradigms reside. “Tensions” here is not a physics-based definition but the alternative (and squishier) sociological definition popularized in design applications such as Systemic Operational Design, US Army design theory, and US Special Operations Command approaches taught in the Joint Special Operations University.⁷ These tensions also illustrate ontological (what we decide our knowledge is and what it is not—the essence of what we think reality is) and epistemological (the “how” of producing our knowledge; the scope of our knowledge and apparent nature of formation) choices made at highly conceptual levels within each paradigm.⁸ Here, if one decides to understand reality with objectivism as well as stability, he or she will subsequently make sense quite differently than by selecting another paradigm with dissimilar ontological and epistemological choices.⁹ We just deny that interpretation of reality and move on with things. The interacting philosophical concepts of ontology and epistemology are significant in that they remain abstract yet profoundly overarching processes which subsume our socially constructed worlds. Societies, including military organizations, see past these choices insofar as they take them for granted, as *the way the world simply must always be*.

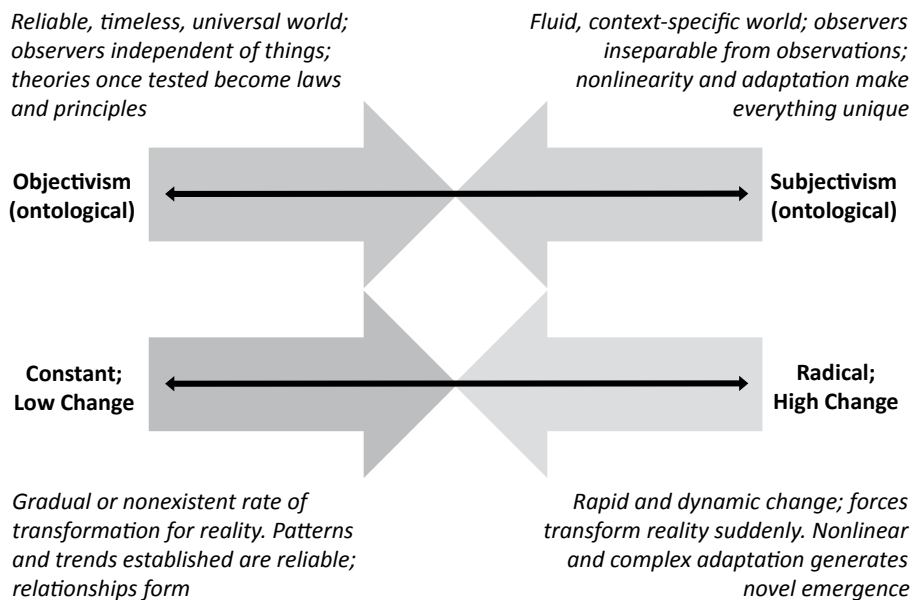


Figure 1. Tensions and paradox visualized with two lines

Figure 1 demonstrates the first dichotomy between objectivism (universal world removed from observers where testable theories become reliable laws) and subjectivism (fluid, context-specific reality where observers are part of the dynamic reality). For example, in a highly objectivist world, observers might experiment upon something in a laboratory, and their own actions are independent of the experiment. Like a watchmaker or mechanic, they might break down something complex, solve problems at a simpler level, and later reassemble the experiment into the larger whole. When considering if multiple “worlds” exist or simply one, readers are reminded that the Burrell and Morgan four-paradigm construct explained in figures 1 and 2 relies upon two important distinctions. Firstly, the social construction of reality subsumes that organization’s worldview so that there is only one world and that no alternative paradigms are valid. Secondly, many sociologists explore paradigm interplay (collaboration as well as friction or incommensurability between paradigms) when groups that espouse differing worldviews interact in complex reality.¹⁰

We tend to see quite a bit of objectivist approaches when military intelligence analysts produce solutions in which adversaries ought to be considered in universal, highly objectivist ways that exclude any hint of US cultural bias or error on behalf of the analyst.¹¹ The objective analyst sees no accidents, desires control, and assumes that over time one might gain greater understanding (and control) even of highly complex situations and environments via rigorous testing and data collection.¹²

Subjectivism works in tension with this highly objective ontology whereby an analyst might see control as an illusion and whereby gains in knowledge and experience also produce emergence in the environment; one simply cannot set foot in the same river twice.¹³ The fluid, subjective world is often perceived within studies of Eastern (or perhaps simply non-Western) societies.¹⁴ Many of the familiar Western (and implicitly universal) laws of war, principles, and timeless structures that operate on the objectivist side lose their value and bearing on the subjectivist side. There is extensive research in postmodernist as well as sociological disciplines on this topic although they are frequently a minority voice within traditional military professional education.¹⁵ Regardless, context matters for the subjectivist approaches, as do time and space, yet they matter in entirely different ways and purposes than the more familiar objectivist perspective.

The second dichotomy in figure 1 illustrates a tension between stability (consistency; reality remains predictable and more linear) and radical transformation (nonlinearity, emergence, and surprising adaptation). In a stable worldview, even over great periods of time and space, we observe a general consistency to reality. The stable perspective on war might see a pattern spanning most of human civilization in which, as Clausewitz argues, endless cycles of politics and war intertwine—much like ongoing duels at larger, state-centric scales.¹⁶ At the radical end of this tension, we might observe profound transformation over time and space, such as Michel Foucault's study of crime and punishment in human societies.¹⁷ As a post-modern philosopher, Foucault argues that Western civilization has moved from one form of penal system (the original violent and public spectacles of old) towards an institutional and more rehabilitative (as well as private) form. This gradual transformation permeates the human condition; thus, any social construction of reality changes with society at abstract and often tacit philosophical levels.

With these tensions, sociologists Burrell and Morgan first built their model of four dissimilar paradigms.¹⁸ This useful visualization forms an important second step for establishing different ways of viewing reality and organizing therein. Figure 2 modifies their original quadrant chart by using arrows from figure 1 to help visualize the ontological and epistemological forces afoot in each dissimilar paradigm. This approach also leads to a different way of looking at professional military reading lists.

Figure 2 depicts the four paradigms termed *functionalism*, *interpretivism*, *radical structuralism*, and *radical humanism*.¹⁹ Each of these paradigms is distinct, and we shall briefly outline them to establish necessary structure to this article's major arguments. Paradigms appear to many (but not all) theorists as constructs that do not play nicely with one another.²⁰ Of these four paradigms vying for dominance across multiple societies and organizations, functionalism is decidedly the "king" for Western societies and military organizations within. The four-paradigm framework is one of many ways of categorizing different worldviews for human civilization, but this article employs the Burrell and Morgan model as a useful cognitive framework for military professionals to consider.²¹

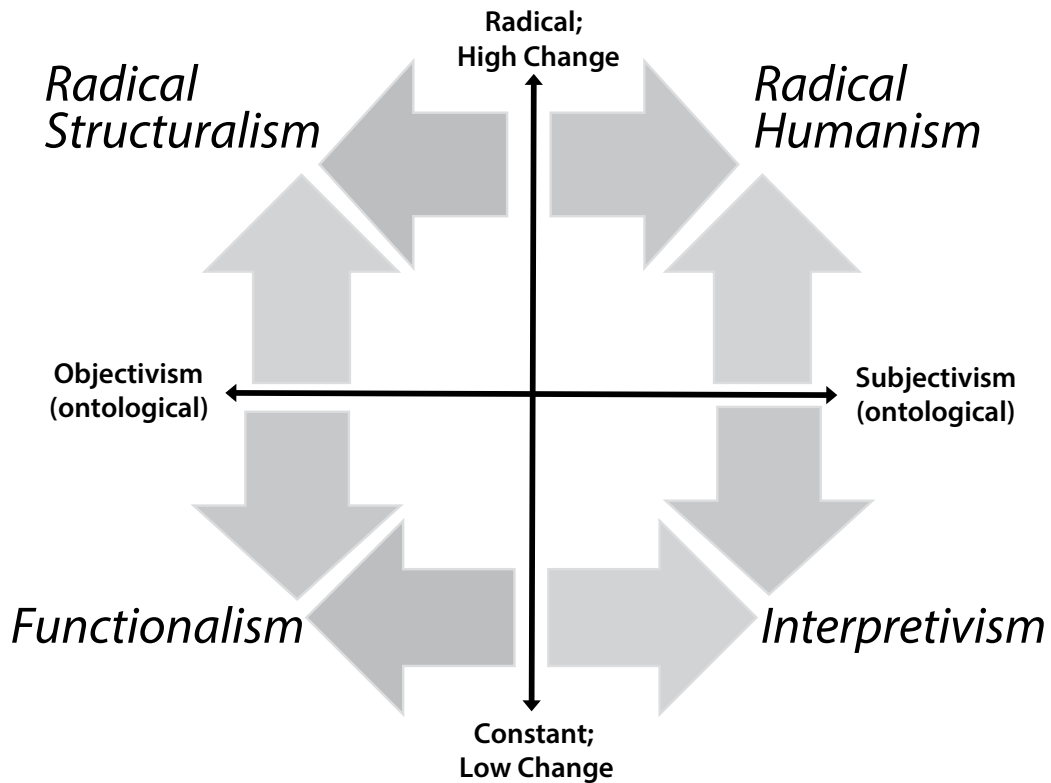


Figure 2. Variation on Burrell and Morgan's quadrant chart of four paradigms

Functionalism denotes a single paradigm that interprets reality so that the world is systematic and reducible through scientific approaches, measurements, and repeatable linear processes. Once a “law” is verified, it becomes universal and timeless; the characteristics of a bullet’s trajectory remain constant anywhere in the world, now and eight centuries from today.²² Functionalist organizations dominate the landscape, with the accomplishments of NASA, almost all major corporations, and the vast majority of hard sciences embracing a functionalist outlook. Functionalism works exceedingly well in many situations but perhaps less so in complex environments.²³ Despite functionalism’s status as the dominant paradigm for many Western organizations (including all Western militaries), there are others to consider.²⁴

On the opposing end of functionalism resides “radical humanism,” involving subjectivity and radical change as ontological choices. Radical humanism seeks to free societies from overarching, dominant social structures and, through critical reflection, to help profoundly transform societies into novel, emergent forms.²⁵ Examples of radical humanist approaches occur in postmodernist philosophy as well as activist positions that apply tailored narratives to fluid, subjective environments.²⁶ Although few military applications of radical humanism exist, one finds several efforts

within small groups of military theorists.²⁷ Radical humanism is the polar opposite of functionalism within the Burrell and Morgan quadrant; thus, for most functionalist thinkers, the radical humanist camp seems almost unrecognizable. A subjectivist world where radical change is the norm means that nearly all of the functionalist cognitive tools become meaningless. Some postmodernist approaches thrive within this fluid uncertainty.

The other two paradigms are interpretivism and radical structuralism. The latter relates to radical humanism in the dynamic and nonlinear emergence for social change yet relates to functionalism in that radical structuralism takes the ontological position of objectivity.²⁸ Socialist movements and revolutions are often associated with radical structuralism in that Marx (Karl, not Groucho) and others associate radical transformation with universal and overarching political and economic forces.²⁹ Radical structuralism incorporates many of the “end of the world” scenarios found in literal interpretations of certain ideologies and thus has value in considering the motives of groups like the Islamic State. In profoundly dissimilar ways, socialists and radical Islamic terrorists become strange bedfellows within radical structuralism.³⁰

Interpretivism takes a dichotomizing stance against radical structuralism, seeing a fluid and subjective reality that also harbors stability and long-term meaningful social structuring.³¹ For interpretivists, people socially construct realities that can be explored through narratives, descriptions, and explanations which do not hold to analytical, linear, or scientific models. Sociologists such as Karl Weick and Donald Schon offer numerous examples of the interpretivist study of military organizations (aircraft carrier operations) as well as paramilitary ones such as smoke-jumping fire fighters.³² The interpretivist approach has some similarity to functionalism due to shared ontological positions on stability; thus, many “soft science” approaches in sociology, anthropology, and philosophy produce common ground for functionalist and interpretivist alike.³³

Burrell and Morgan's four paradigms present an important element for this article's framework for realizing why the military as a profession might posit most reading lists within one limiting paradigm. Paradigms seek to exclude the others and channel all comprehension and socialization of how reality works into processes that reinforce the one chosen paradigm as exclusive. Consequently, most of our institutions are unaware of and intellectually positioned to be hostile to any concept which operates beyond the carefully drawn boundaries that maintain that worldview.

To promote critical and creative design approaches, military professionals should first acknowledge and critically reflect on the dominant paradigms used to make sense of reality. We must avoid the cognitive trap of enforcing a single dominant paradigm and denying the relevance of the other three; instead, we should consider approaches in which multiple paradigms might influence a fusion of design ideas and approaches.³⁴ How we choose our books (as well as other media content) is not as interesting as *why we reject other books as “not worth the candle” to bother reading at all.*

Dominance of the Functionalist Worldview and Its Exclusive List of Military Books

Of the many military professional reading lists, we chose those of both the 2014 Army chief of staff and the Air Force chief of staff to illustrate the dominance of the functionalist strategic outlook as the preferred paradigm for the military profession.³⁵ This article does not challenge the books individually on these or any other professional reading list. However, it offers another way of framing them that promotes one paradigm dominating at the expense of other views. Clearly, all of these books are useful for members of the military profession to read. More interesting is how they all interrelate and how patterns of books might be left out.

Figure 3 illustrates where books from the Army reading list would appear, based upon the dominant paradigm employed by the author. Of the 26 books, I determined that only two of them were clearly from another paradigm (both interpretivism)—*Soldier's Heart* and *Managing the Unexpected*—both of which use interpretivist approaches instead of purely functionalist ones and therefore offer readers an alternative paradigm to consider. Two paradigms remain completely absent from the list. Granted, any categorization of a reading list into paradigm correspondence is itself a subjective task; books were considered in terms of whether they held to ontological choices that supported one or another tension outlined in figures 1 and 2. Readers may have strong objections to the classification of a particular book within the Burrell and Morgan construct but might appreciate the overarching approach and value of framing entire reading lists in this fashion. Just as we all might resist any overt criticism of a favorite movie or TV show, so are books frequently a hot topic for professionals with regard to which paradigm they most closely support.

Although another five books on the Army reading list have interpretivist leanings—*The Red Badge of Courage*, *The Starfish and the Spider*, *The Art of War*, *The World Is Flat*, and *On War*—they still are either used by the majority of our military profession in a functionalist mind-set or have only elements of interpretivism with a majority of content geared towards functionalism. In some situations, these books contain enough subjectivist constructs that military readers may explore well outside the dominant functionalist paradigm. However, books like *The Red Badge of Courage* and *The Art of War* can be applied (or misapplied) in either an interpretivist or a purely functionalist mind-set, depending upon the reader and organizational tendencies. As the Western overarching military tilts decidedly functionalist, one may assume that these “interpretivist leaning” books are more often than not forced into largely functionalist interpretations. For instance, when military professionals attempt to establish rules and “principles of warfare” cast within the interpretivist writings in *The Art of War*, we see the functionalist dominant paradigm in action.

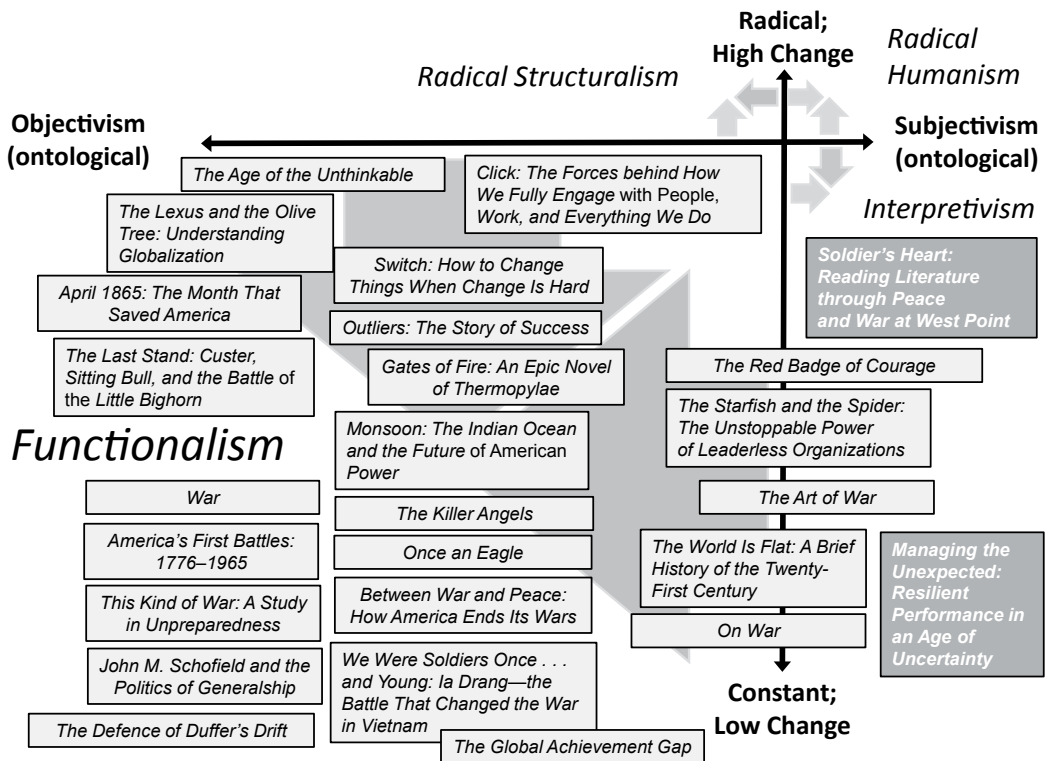


Figure 3. Army chief of staff's 2014 reading list and the dominance of functionalism

Although a controversial position worthy of an article itself, we suggest that Carl von Clausewitz's seminal work about war theory, *On War*, is largely applied (*perhaps misapplied*) by most military theorists in a largely functionalist approach (principles of war, laws, trinities, and objective stability wherein patterns emerge in conflict).³⁶ Whether a select few do apply Clausewitz within other paradigms does not override the vast majority of military professionals who interpret the work within a purely functionalist strategic outlook. When it comes to *On War*, most of the institution seeks some sort of acontextual and ahistorical framework upon which to ponder all wars, regardless of time and space. Napoleon did some things while Patton did others, but one might use the war philosophy contained in *On War* to establish overarching patterns that subsequently make for important chapter quotations within modern military doctrine. Without Clausewitz, doctrine writers might need to heavily edit existing products.³⁷

Furthermore, this article does not ignore the paradox that in order for us to determine the paradigmatic origins of any book list, we have to employ what is largely a functionalist metric to categorize and evaluate. Using a quadrant model with highly analytical plotting is visually and cognitively the most effective manner to convey a nonfunctionalist idea to a military audience that largely adheres to a functionalist paradigm. Lastly, before the hand wringing begins on how books that seem to have

“radical change” phrasing in their titles or thesis were still placed inside the functionalist paradigm, we wish to remind readers that functionalism indeed has emergence, nonlinearity, decentralization, swarm, and complexity theory (for those books that address these topics yet remain decidedly functionalist). The epistemological choices that functionalism makes on the nature of reality are critical here.

Functionalism sees contextual change within stable, overarching, governable processes; or as individuals we can move anywhere on the planet without worrying about gravity suddenly transforming tomorrow into something new.³⁸ Gravity remains constant; we are free to move about the planet. This principle works exceedingly well for simplistic, closed, and even complicated systems. Human societies, however, do not fall within such neat systematic approaches.³⁹ Continued efforts to channel society into a functionalist worldview can be traced across far too many books on the Army reading list.

The Army chief of staff's reading list for 2014 is not to be outdone in the single-paradigm dominance. This article also examines the Air Force chief of staff's list for the same year, which includes 12 books (fig. 4).⁴⁰ In an example of complete paradigmatic dominance, all of these books fall firmly within a functionalist paradigm for topic, approach, and the author's ontological and epistemological choices to construct reality in an objective and low-change organization. Again, this statement is not criticism of any of these 12 excellent books for military professionals; rather, it is a charge leveled at the holistic and interrelated justification of a single paradigmatic dominance that guides the Air Force profession in one direction. This is about *thinking about how we think and why*.

We do not discount either the content or logic of these authors but simply point out that all of the 12 books presented rely on the same functionalist paradigm for interpreting reality. Even authors of sociological topics such as *Crucial Conversations* and *Sticking Points* used a quantitative, measured, and step-by-step model of how readers can improve organizations and engagements. One paradigm is not “better” than another, nor is any single book inferior just because it relies upon one paradigm. Nevertheless, when we holistically think about entire reading lists for our military organizations, is it useful for functionalism to dominate so pervasively? Does this dominance inhibit our thinking about our thinking? Can we truly be critically reflective and creative if we use just one approach to sensemaking about reality? Can a reading list consider things *from a transdisciplinary manner* that considers multiple paradigms?⁴¹

Figures 3 and 4 represent the dominant functionalist paradigm and the way the Army and Air Force as a larger collective military profession tend to determine what they will perceive about reality: “A system perceives those things that will enable it to maintain its organization (i.e., its identity).”⁴² Granted, some people may object to the categorization of one particular book or another into a paradigm they violently disagree with, but what about the preponderance of books in these two groups? Can one excuse such a large degree of functionalist-minded readings? For design approaches, how might our military develop a transdisciplinary approach to perceiving things in different ways? By “transdisciplinary,” we mean that one might move up and out of one's own preferred paradigm, appreciate other paradigms, and navigate between them to develop interactions, overlap, tensions, and interplay.⁴³

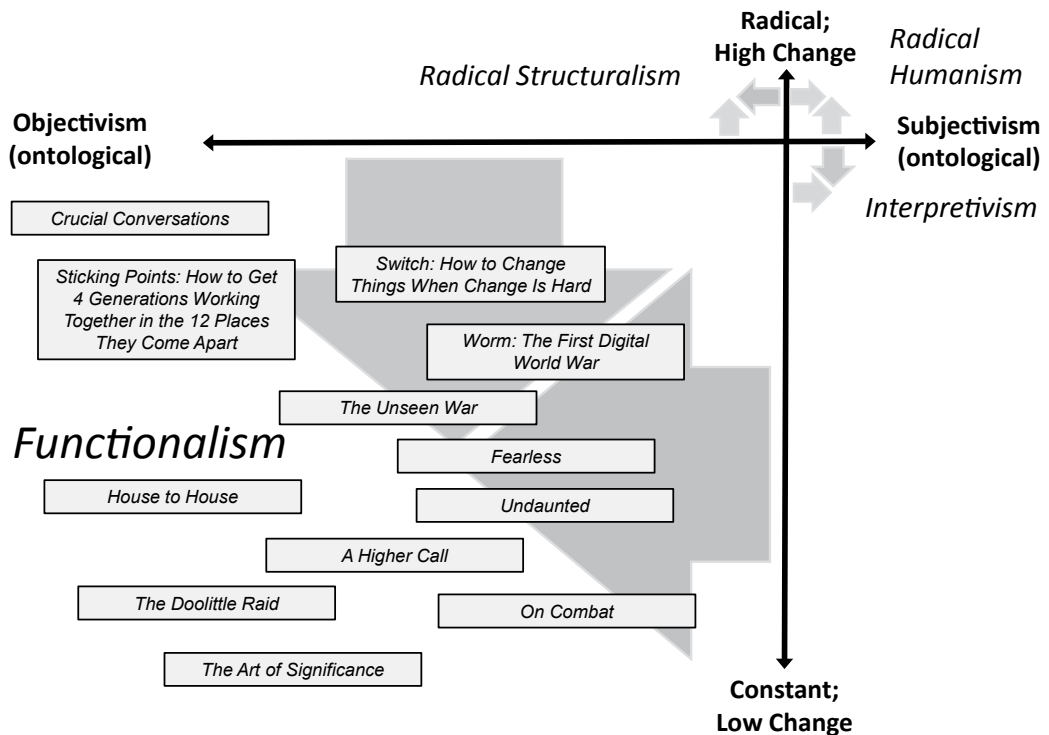


Figure 4. Air Force chief of staff's 2014 reading list and the dominance of functionalism

Can our Air Force and Army broaden our reading lists to include paradoxical, incommensurate, and possibly radically dissimilar perspectives on the same things? Does such an effort even matter if perhaps getting an organization to maintain control and universal reliability is paramount to creative and critical adaptation? The modern uncertain and complex conflict environments seem to summarily reject conventional, traditional, and centralized hierarchical approaches. Acknowledging that “doing things in ways that showed success in the past” is no longer a viable model for projecting future organizational development, we need to reconsider how and why we think the way we think. Challenging our preference of a single dominant paradigm (paradigm blindness) will open up reading opportunities in other paradigms, promoting creativity and organizational growth.

Some problems associated with any approach to a multiparadigm reading list exceed the scope of this article and would be a useful topic of further investigation. Firstly, it is unknown whether any multiple paradigm configuration of reading lists has any positive effect upon a military organization. The baseline for any future research rests on the fact that most existing professional military reading lists appear to have strong functionalism leanings. Secondly, because functionalism is “king” of the paradigms, not very many articles, books, or other materials are available in other paradigms as potential food for future lists. In the case of the Air Force and

the reoccurring methodology of retiring books after they appear once on an annual list, any effort to place several radical humanist readings might quickly run out of options. Thirdly, although this article offers next an “ideally balanced paradigm reading list,” this option is likely unrealistic and difficult to manage. Further sociological research might explore whether some other ratio such as a 60 percent functionalist, 40 percent nonfunctionalist reading list works best—or some other composition. For this article, the only solid position arguable at this point is that a reading list with only one paradigm dominating the perspectives may be of less value than a list with greater inclusion of alternative paradigms.

Other Books That Provide a Multiparadigmatic Chorus

To demonstrate a multiparadigmatic approach to constructing reading lists for the military profession, this article supplies a framework with some potential candidates. These suggestions do not imply individual “book versus book” superiority to any other military reading lists; however, we argue that any list which balances among the four paradigms instead of just one has greater potential for organizational development, critical reflection, and creative innovation beyond the first order of understanding (single paradigm thinking).⁴⁴ Individuals guilty of first-order understanding categorically deny the relevance of alternative paradigms or end up talking past the other perspective in an incommensurate fashion.⁴⁵

The books recommended below are merely alternative paradigmatic examples that can easily be swapped out with other books, provided that the final reading list does not again descend into single paradigm dominance. In fact nearly any other book might work instead as long as the reading list composer first considers the origin paradigm of the works. Should some suggested books seem too “out there” or perhaps not worth the time for the organization to read, certainly a professional might find other books that simply operate from a nonfunctionalist outlook. One might make 1,000 different reading lists for the profession, yet as a learning organization we might value those that are balanced to represent four paradigms instead of one. In this way, an organization develops and perhaps stops trying to apply the same old solutions that no longer work to complex adaptive problem sets.

Military Readings with Radical Humanism

Radical humanism is perhaps the most divergent from functionalism and therefore one of the most challenging positions to start with. Books using a radical humanist approach tend to be rather unlike most military-friendly concepts, using a variety of subjective, conceptual, and highly transformative processes devoid of familiar functionalist language, analysis, and quantitative logic.⁴⁶ Examples of radical humanist approaches occur in postmodernist philosophy as well as activist positions that apply tailored narratives to fluid, subjective environments. Regardless, many of these books offer novel and profoundly different ways for military professionals to consider reality, military complexity, and thinking about how we think. This prospect can be rather unsettling for devout functionalists, in much the same way that poetry might swiftly be rejected within the traditional science lab.⁴⁷ Military professionals

need to be warned that of all the alternative paradigms, radical humanism is in strongest ontological and epistemological tension with functionalism; thus, these books and the concepts presented within are perhaps the most problematic to consider on many cognitive, linguistic, and structural levels. Or, for most functionalists, the radical humanist reading list is potentially the most offensive. Before ignoring or disregarding alternative outlooks outright because of professed paradigm bias, professionals might give some time and energy to these selections.

1. Jean Baudrillard, *Simulacra and Simulation*, translated by Sheila Faria Glaser.⁴⁸ This postmodern radical humanist book confronts how reality is socially constructed, maintaining that our society creates illusions that displace reality while confusing us. It forms the conceptual foundation for the popular *Matrix* science fiction trilogy and offers military professionals a novel way to explore how institutions define themselves as well as reality itself. The movie complements the book insofar as reading it provides deeper insight into the films.⁴⁹
2. Jacques Rancière, *The Ignorant Schoolmaster*, translated by Kristin Ross.⁵⁰ Another French postmodernist approach within radical humanism, *The Ignorant Schoolmaster* tells the story of French educator Joseph Jacotot, who challenged European pedagogy in the early nineteenth century by teaching students in an unconventional way (i.e., he did not know the subjects they were learning). Military professionals can explore entirely dissimilar ways of security force assistance, unconventional warfare, and the entire military professional education system through Rancière's presentation of Jacotot.⁵¹
3. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, translated by Brian Massumi.⁵² Arguably a most difficult and confusing read for people unfamiliar with postmodernist language and narrative structure, Deleuze and Guattari's 12th chapter, "The War Machine," is most applicable here for a largely radical humanist approach. The authors were inspired by Nietzsche's philosophy and make some critical points on the nature of warfare, society, humanity, and change. For this work, a compendium or additional sources are highly recommended.
4. Chuck Palahniuk, *Fight Club*.⁵³ Unlike the French postmodernism found in the first three suggestions, *Fight Club* is an exciting work of fiction. Just as Baudrillard's work became *The Matrix*, so was Palahniuk's novel made into a movie with the same title. *Fight Club* presents several themes, one of them presenting much of the radical humanist desire to dismantle the socially constructed world and free humanity from the shackles of capitalism, hierarchical organization, and modern society.

Military Readings with Radical Structuralism

Radical structuralism shares with functionalism the ontological decision that reality is largely objective, whereby forces and processes once defined and confirmed can be relied upon across time and space. However, radical structuralism deviates from functionalism in that radical change and nonlinear transformation occur. Radical

structuralism is often associated with Marxism (the Socialist movement instead of the Comedy Troupe), but one can argue that other approaches which espouse an “end of the world” prediction (eschatology) within human society share many forms and functions within the radical structuralist paradigm. Thus, the Islamic State becomes a possible example within radical structuralism, albeit for different reasons than those of Marxist groups. One foresees a utopia where workers of the world unite and defeat capitalism while another envisions an ideological paradise cast upon Armageddon. The following books provide valid sources for military professionals to consider.

1. Qiao Liang and Wang Xiangsui, *Unrestricted Warfare*.⁵⁴ Liang and Xiangsui serve up a decidedly non-Western approach to interpreting American foreign policy and military strategy. Radical structuralism is not equal to non-Western; however, these authors do apply multiple radical structuralist ontological choices on their view of warfare that convey several eschatological outcomes for technology, war theory, conflict, and human societies. In the situation that the US Air Force has used this work (and may have retired it from future lists), it opens the discussion to whether in low-volume sources within nonfunctionalist paradigms, some titles might have utility reappearing in subsequent annual lists.
2. Anatol Rapoport, “Editor’s Introduction to *On War*,” in Carl von Clausewitz’s *On War*.⁵⁵ In this introduction to the 1968 Penguin Books edition, Rapoport puts forth a decidedly radical structuralist contrast to the bulk of Clausewitz’s strategy of war. The editor offers a variety of worldviews for radical structuralists that might feature ideological or political positions that break from the functionalist perspective on human conflict. Reading the rest of *On War* after his introduction offers military professionals another way of critically and creatively reflecting upon Clausewitz with both a functionalist and a radical structuralist paradigm.
3. Raphael Patai, *The Arab Mind*.⁵⁶ Although this is a controversial book when misused within a purely functionalist methodology, military scholars can gain valuable insight into Israeli researcher Patai’s approach. He uses elements of radical structuralism towards assigning “national character” forces that generalize entire societies and embrace objectivist ontologies on how the Arab society functions. Readers can apply multiparadigmatic concepts to this book as well as the author in order to appreciate radical structuralism.
4. Sayyid Qutb, *Ma’alim fi al-Tariq (Milestones along the Way)*.⁵⁷ Written in prison by Qutb and later used to sentence him to execution by the Egyptian government, *Milestones* is a powerful Islamic example of radical structuralism. Qutb provides a linear narrative for instructing Islamic society to radically transform from what he views as a broken or extinct path into an ideologically mandated perfect society where tyranny is eliminated and the world exists only in a freed Islamic-based existence. Qutb’s work parallels nonideological socialist writings and shares with them the radical structuralist paradigm.

Military Readings with Interpretivism

Interpretivism offers the shared epistemological decision that functionalism has where reality remains consistent, but interpretivism makes sense of the world through a highly subjective lens that rejects analytical, quantitative processes. Interpretivists see the world as fluid—one in which qualitative trumps quantitative and the observer must be included within the observations. Thus, a scientific approach involving attempts to remove the scientist from the equation is not possible within interpretivism, nor can analytical logic form anything predictive or static. Heraclitus's maxim of "never being able to step in the same river twice" sums up how interpretivist subjectivity stands in stark contrast to functionalism's objectivity.⁵⁸ Time becomes both irreversible and "a constitutive element in the formative processes of things and not simply a convenient parameter."⁵⁹ Subjectivity requires personal experience and meaning to dominate over objectivist fixations on universal truths and testable hypotheses. Interpretivists act to "un-name, decontextualize, blur shapes, drop forms, clear the imagination, accept the airy nothing, and reimagine the flux, *slowly*, back toward shapes, local habitations and names" (emphasis in original).⁶⁰ This sort of approach tends to turn away functionalists seeking the objectivity of acontextual and ahistorical processes that support hard science and a stable worldview.

1. Hayden White, *The Content of the Form: Narrative Discourse and Historical Representation*.⁶¹ White supplies an interpretivist approach to how societies construct narratives and stories, as well as how they convey knowledge. He explores the construction of history by societies and goes deeply into the notion of time, space, context, meaning, symbols, and cognition.
2. Peter Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*.⁶² The authors offer an interpretivist perspective on how societies construct, share, and defend knowledge against rival factions and dissimilar societies.
3. Paul Ricoeur, *Time and Narrative*, translated by Kathleen McLaughlin.⁶³ Ricoeur leads a deep interpretivist journey into the meaning of language, symbols, and human understanding, where "language is oriented beyond itself. It says something *about* something" (emphasis in original).⁶⁴ Societies construct elaborate systems of signs that operate implicitly around us.

Military Readings with Functionalism Reduced

Although any of the predominantly functionalist books within the 26 books offered earlier in the Army chief of staff's reading list are suitable within a functionalist perspective, this article instead offers the following, which pair well with the other paradigms and suggested readings. Many of these books seem to have very little to do with the military profession; however, the subject matter should not be a limiting factor if we are discussing an ontologically neutral approach to military professional development. Otherwise, piling books on military history, military fiction, and military leadership could suffice for any reading list. In other words, suppose

we lock five military history professors in a room and try to get them to agree on a reading list for any given military conflict. Stark opinions would most definitely occur, for good reason. Creativity often works best when the thinker is unshackled from the standard and often repetitive structure; forcing readers to move away from purely military subjects can trigger avalanches of military ideas and reflections. Any of these books might be replaced with suitable others, *provided that the entire reading list appreciate a transdisciplinary representation.*

1. Douglas Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid*.⁶⁵ The author blends mathematics, artificial intelligence theory, music, art, and narratives to formulate his arguments on complexity, human cognition, and the way we understand reality. This Pulitzer prize winner is lengthy and contains advanced mathematics that Hofstadter instructs nonmathematicians to skip while he leads off each chapter with a clever vignette that employs metaphor to convey deep concepts.
2. Nassim Taleb, *The Black Swan*.⁶⁶ Taleb's work employs an elegant yet easy-to-read approach to complexity theory. The author uses regular activities and examples from the real world to convey his concepts, including how bell curves and other predictive models fail in complex adaptive environments. Taleb's other works, such as *Antifragile*, are applicable here as well although *The Black Swan* may offer the best of a functionalist approach. Since his works have been on earlier Air Force reading lists, the chief might substitute yet another book that looks at complexity theory, such as Haridimos Tsoukas's *Complex Knowledge: Studies in Organizational Epistemology* or Antoine Bousquet's *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity*.⁶⁷
3. Carl Builder, *The Masks of War: American Military Styles in Strategy and Analysis*.⁶⁸ Builder completed this study of American military services for RAND in 1989, brilliantly analyzing the overarching narratives and the collective socially constructed realities that each service generates. He suggests that a service draw from powerful historical narratives in order to continue self-relevant actions and compete, even against national interests, for future military relevance in conflicts.

Conclusion

Military reading lists continue to adapt and change as our profession develops new ideas and discards irrelevant or dysfunctional ones. Although most lists tend to deliver a single paradigm position that prevents comprehensive understanding across multiple paradigms, this article has presented solutions to paradigm blindness by employing a transdisciplinary approach. Figure 5 aligns 14 suggested books within their associated paradigm although any one of them is not nearly as important as the paradigm balancing across all of them holistically. Any of these books can be substituted for others, provided that the complete list shows valid voices and ideas from across dissimilar and potentially incommensurate paradigms. These are

merely 14 of countless others available. Perhaps an organization needs a majority within one paradigm over the others, yet any reading list becomes suspect when only one paradigm dominates in a pervasive and implicit manner.

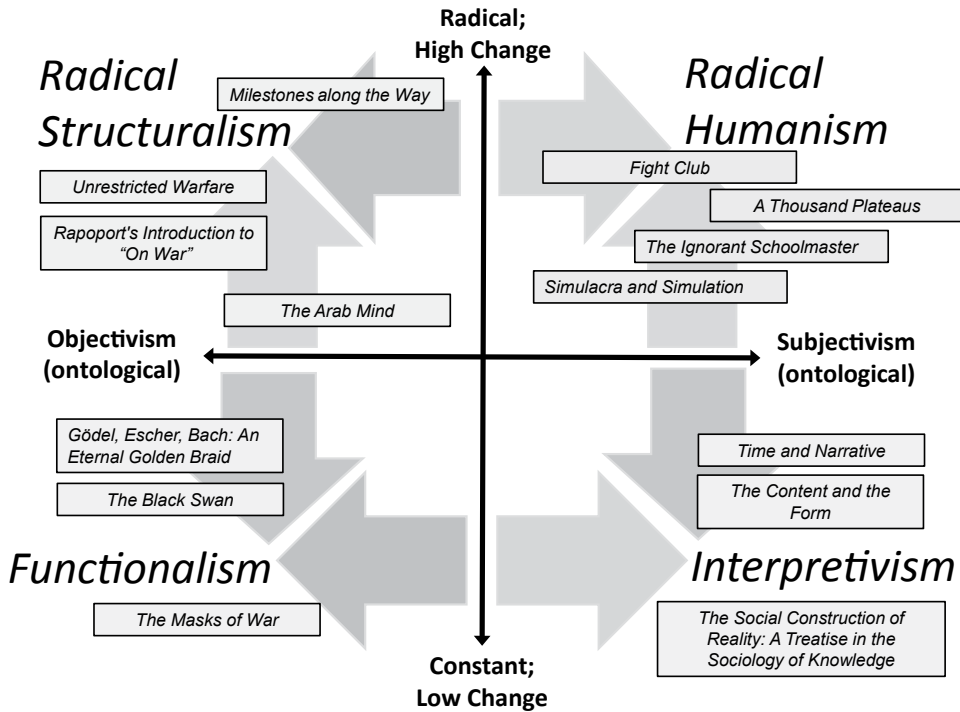


Figure 5. Designing suggested books across all paradigms

Figure 5 presents one way to approach military professional reading lists whereby our first concern is not on the individual books but on the overarching paradigm awareness. We are not only thinking about the books *but also thinking about thinking about our books*. Balance across multiple paradigms gives us the sort of intellectual well-roundedness and curiosity that our military organizations require in complex adaptive environments. Traditional single-paradigm reading lists no longer work; we simply cannot continue to reinforce such a limited worldview while insisting that our forces are capable of creativity and innovation that a single paradigm prohibits. Figure 5 may be an idealized approach with equal balance across each paradigm for consideration of a professional reading list. As discussed earlier, further research is necessary for sociologists to study whether some other ratio of book-to-paradigm structure provides additional benefit to military professional development over time. Figure 6 presents several hypothetical alternate reading list ratios that a military service might consider in the absence of sociological inquiry. Again, the one significant charge made in this article is that any ratio may have potential while any reading list with a vast majority of reading suggestions

mired in a single paradigm likely presents a myopic approach to complexity and warfare. With US military forces shifting to “human domain” and “gray zone” concepts in 2015–16, complexity is moving towards the forefront of our gaze. Our reading lists should follow suit.

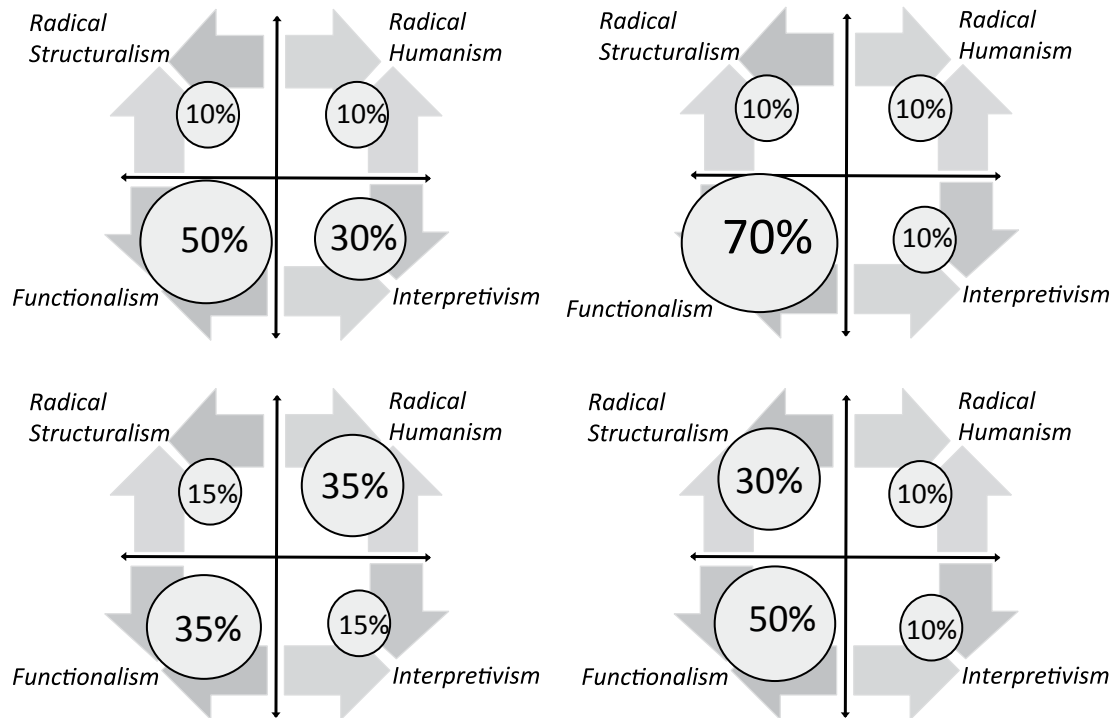


Figure 6. Hypothetical reading ratios for further sociological study

Other professions might advance through single paradigm approaches, but the military struggles with what functionalists define as “the human domain” because human societies are complex (and, paradoxically, resist being fractured into “domains”).⁶⁹ We may live in a world where scientists can indeed measure beams of light, engineers can assemble and disassemble complicated engines, and doctors can perform precise brain surgery, but all of these humans interact in uncertain and adaptive ways. If any profession needs to spread its cognitive wings and break out of paradigm blindness, the military does. Ours is the only profession that attempts to balance security with governmental coordination, confronting aggressors and the complexities of human societies while scientists, engineers, and brain surgeons go about the business of life within these uncertain environments. In the twenty-first century, our profession first and foremost concerns itself with understanding multiple ways of perceiving reality so that we apply lives and resources in the most productive ways imaginable instead of rather unimaginatively. To guide our military organizations towards adapting novel strategy, designing creative and

critical concepts, and appreciating emergent complexity in uncertain conflict environments, we need to read from more than a single paradigm. ★

Notes

1. Timothy Challans, "Military Review Classics Revisited," review of *Zen and the Art of Motorcycle Maintenance*, by Robert Pirsig, *Military Review*, March–April 2009, 128.

2. Valerie Ahl and T. F. H. Allen, *Hierarchy Theory: A Vision, Vocabulary, and Epistemology* (New York: Columbia University Press, 1996), 18. To think about thinking implies "metacognition"—focusing on the "why" of thinking instead of the "what." See also Karl Weick, "The Role of Imagination in the Organizing of Knowledge," *European Journal of Information Systems* 15 (2006): 448–51; and Haridimos Tsoukas and Robert Chia, "On Organizational Becoming: Rethinking Organizational Change," *Organization Science* 13 (2002): 571.

3. Gibson Burrell and Gareth Morgan, *Sociological Paradigms and Organisational Analysis* (London: Heinemann, 1979); and Dennis Gioia and Evelyn Pitre, "Multiparadigm Perspectives on Theory Building," *Academy of Management Review* 15, no. 4 (1990): 584–86. See also Gary Weaver and Dennis Gioia, "Paradigms Lost: Incommensurability vs. Structuralist Inquiry," *Organization Studies* 15, no. 4 (1994): 567–69; Colin Clarke-Hill, Huaming Li, and Barry Davies, "The Paradox of Co-operation and Competition in Strategic Alliances: Towards a Multi-paradigm Approach," *Management Research News* 26, no. 1 (2003): 1–20; Aaron Jackson, "Innovative within the Paradigm: The Australian Defence Force's Reinvigoration of Joint Operational Art," n.d. (unpublished draft provided by author in personal correspondence, University of New South Wales); and Thomas Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. (Chicago: University of Chicago Press, 1996), 147–50. Kuhn posits that paradigms are incommensurate (although within a largely quantitative approach as compared to Ritzer, Burrell, Morgan, Pitre, Gioia, and other sociologists cited in this article). Here, we make ontological choices associated with the paradigms of functionalism and interpretivism to isolate objectivity and subjectivity.

4. George Ritzer, *Sociology: A Multiple Paradigm Science*, rev. ed. (Boston: Allyn and Bacon, 1980), 7. See also Kuhn, *Structure of Scientific Revolutions*, 5–15.

5. The sociological direction of Ritzer is best illustrated in *Sociology: A Multiple Paradigm Science*; and "Professionalization, Bureaucratization and Rationalization: The Views of Max Weber," *Social Forces* 53, no. 4 (1975): 627–34. Kuhn, however, takes a "philosophy of science" direction that Ritzer differs from. See *Structure of Scientific Revolutions*. The other sociologists cited in this article tend to move closer to the sociological aspects of Ritzer on paradigms. See also Burrell and Morgan, *Sociological Paradigms and Organisational Analysis*; Gareth Morgan, "Exploring Plato's Cave: Organizations as Psychic Prisons," in *Images of Organizations* (San Francisco: Sage Publications, 2006), 520; Morgan, *Images as Organizations* (Oakland, CA: Berrett-Kohler Publishers, 1998); Gioia and Pitre, "Multiparadigm Perspectives," 584–602; Weaver and Gioia, "Paradigms Lost," 565–90; and Christopher Paparone, *The Sociology of Military Science: Prospects for Postinstitutional Military Design* (New York: Bloomsbury Academic Publishing, 2013), 161–79.

6. Burrell and Morgan, *Sociological Paradigms and Organizational Analysis*; Gioia and Pitre, "Multiparadigm Perspectives," 584–86; and Weaver and Gioia, "Paradigms Lost," 567–69.

7. The author consulted US Special Operations Command's (USSOCOM) Joint Special Operations University (JSOU) in 2015 to help establish and subsequently instruct in its Design Theory for Practitioners course as well as other design efforts. The author researched Israeli Systemic Operational Design (SOD) in 2010 during a stay at the US Army School of Advanced Military Studies where students also learned Army design theory (now Army design methodology). SOD research involved multiple personal interviews with the founder of SOD, retired Israeli brigadier general Shimon Naveh in 2010–11. All of these approaches formally or informally use this sociological definition of "tension."

8. Majken Schultz and Mary Jo Hatch, "Living with Multiple Paradigms: The Case of Paradigm Interplay in Organizational Culture Studies," *Academy of Management Review* 21, no. 2 (April 1996): 530–33. See also Marianne Lewis and Mihaela Kelemen, "Multiparadigm Inquiry: Exploring Organizational Pluralism and Paradox," *Human Relations* 55, no. 2 (2002): 252; and Marianne Lewis and Andrew Grimes, "Metatriangulation: Building Theory from Multiple Paradigms," *Academy of Management Review* 21, no. 4 (October 1999): 673–75.

9. Burrell and Morgan, *Sociological Paradigms and Organisational Analysis*; Robert Cooper and Gibson Burrell, "Modernism, Postmodernism and Organizational Analysis: An Introduction," *Organization Studies* 9, no. 1 (1988): 91–112; Lewis and Grimes, "Metatriangulation," 672–90; and Gioia and Pitre, "Multiparadigm Perspectives," 584–602. Each of these sociologists explores variations on the Burrell and Morgan "four paradigm" heuristic aid. Clearly, there are alternative manners to define, explore, and explain paradigms that exceed the scope of this article.

10. Schultz and Hatch, "Living with Multiple Paradigms," 529–57; Haridimos Tsoukas and Mary Jo Hatch, "Complex Thinking, Complex Practice: The Case for a Narrative Approach to Organizational Complexity," *Human Relations* 54, no. 8 (August 2001): 979–1013; Gioia and Pitre, "Multiparadigm Perspectives"; and Weaver and Gioia, "Paradigms Lost," 565–90. Although Gioia and Pitre take research directions similar to those of Schultz and Hatch, Weaver and Gioia contest the notion of paradigm incommensurability and offer yet another alternative.

11. Antoine Bousquet, *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity* (New York: Columbia University Press, 2009), 52–56.

12. Paparone, *Sociology of Military Science*, 163; Donald Schon and Martin Rein, *Frame Reflection: Towards the Resolution of Intractable Policy Controversies* (New York: Basic Books, 1994), 21; and Haridimos Tsoukas, *Complex Knowledge: Studies in Organizational Epistemology* (New York: Oxford University Press, 2005), 104–6.

13. Jerome Bruner, *Actual Minds, Possible Worlds* (Cambridge, MA: Harvard University Press, 1986), 50–52.

14. François Jullien, *A Treatise on Efficacy: Between Western and Chinese Thinking*, trans. Janet Lloyd (Honolulu: University of Hawaii Press, 2004). See also Jullien, *The Silent Transformations*, trans. Krzysztof Fijalkowski and Michael Richardson (London: Seagull Books, 2011), 6–15.

15. Jullien, *Treatise on Efficacy*, 70–73; Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1994), 62. Foucault outlines the classical system of symbolism that traditional military theorists such as Clausewitz, Jomini, and others appear to utilize. Paul Ricoeur, *Time and Narrative*, trans. Kathleen McLaughlin and David Pellauer, vol. 1 (Chicago: University of Chicago Press, 1983), 98–99. Ricoeur challenges classical Western approaches to history and knowledge construction. Hayden White, *The Content of the Form: Narrative Discourse and Historical Representation*, paperback ed. (Baltimore: John Hopkins University Press, 1990), 157–59. White explores subjectivist approaches that would poorly support Clausewitz's propositions of "centers of gravity" and his enduring trinity. Jacques Rancière, *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation*, trans. Kristin Ross (Stanford, CA: Stanford University Press, 1991). Rancière's thesis deconstructs the entire Western educational process and suggests an alternative that is in opposition to Western pedagogic structures, including our dominant professional military education form. Ben Zweibelson, "The Ignorant Counterinsurgent: Rethinking the Traditional Teacher-Student Relationship in Conflicts," *Military Review* 95, no. 2 (April 2015): 94–105. Zweibelson applies the Rancière postmodernist concept to military counterinsurgency theory.

16. Alan Beyerchen argues that Clausewitz embraces complexity in a preindustrial fashion while Wm. J. Olson asserts that military devotion to Clausewitz is growing irrelevant for modern war applications. Beyerchen, "Clausewitz, Nonlinearity, and the Unpredictability of War," *International Security* 17, no. 3 (Winter 1992–93): 59–90; and Olson, "The Continuing Irrelevance of Clausewitz," *Small Wars Journal*, 26 July 2013, <http://smallwarsjournal.com/jrnl/art/the-continuing-irrelevance-of-clausewitz>.

17. Michel Foucault, *Discipline and Punish: The Birth of the Prison*, 2nd Vintage Books ed., trans. Alan Sheridan (New York: Vintage Books, 1995).

18. Burrell and Morgan, *Sociological Paradigms and Organizational Analysis*. See also Gioia and Pitre, "Multiparadigm Perspectives," 585.

19. Fig. 2 is a modification of the original Burrell and Morgan graphic on four paradigms. The arrows indicate one direction on the spectrums presented in fig. 5. Each paradigm thus has a dissimilar combination of ontological and epistemological forces as compared to the others.

20. Paparone, *Sociology of Military Science*, 77–79; Weaver and Gioia, "Paradigms Lost"; and Schultz and Hatch, "Living with Multiple Paradigms." Weaver and Gioia argue that incommensurability is frequently a misunderstood element between paradigms while Schultz and Hatch offer one methodology for working "interplay" between paradigms without attempting to resolve tensions and paradox.

21. USSOCOM's JSOU, of which this author is the course director for design programs, uses this Burrell and Morgan model for students in their Design Thinking for Practitioners course for 2015–16.

22. Haridimos Tsoukas and Kevin Dooley, "Introduction to the Special Issue: Towards the Ecological Style; Embracing Complexity in Organizational Research," *Organization Studies* 32, no. 729 (2011): 730.

23. Bousquet, *Scientific Way of Warfare*; Bousquet, "Chaoplex Warfare or the Future of Military Organization," *International Affairs (Royal Institute of International Affairs 1944-)* 84, no. 5 (September 2008): 915–29; and Paparone, *Sociology of Military Science*.

24. Paparone, *Sociology of Military Science*, 115–30. See also Gioia and Pitre, "Multiparadigm Perspectives," 585–90.

25. Gioia and Pitre, "Multiparadigm Perspectives," 588–89.

26. For radical humanist examples, see Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987). Deleuze and Guattari devote an entire chapter, "The War Machine," to military considerations. See also Rancière, *Ignorant Schoolmaster*; and Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: University of Michigan Press, 2001).

27. Zweibelson, "Ignorant Counterinsurgent." See also Zweibelson, "Preferring Copies with No Originals," *Military Review*, January–February 2014: 15–25. Zweibelson employs a radical humanist argument of Baudrillard's and Rancière's work (previous endnote) to challenge existing military approaches. Maj Ben Zweibelson, Lt Col Grant Martin, and Dr. Chris Paparone, "Frame Reflection: A Critical Review of U.S. Military Approaches to Complex Situations," *OODA*, September 2013, https://www.ooda.com/wp-content/uploads/2013/09/Frame-Reflection_A-Critical-Review-of-US-Military-Approaches-to-Complex-Situations-final.pdf.

28. Gioia and Pitre, "Multiparadigm Perspectives," 589–90.

29. Qiao Liang and Wang Xiangsui, *Unrestricted Warfare* (Beijing: People's Liberation Army Literature and Arts Publishing House, February 1999). Liang and Xiangsui provide a radical structuralist critique of American military strategy as well as a narrative that prophesies radical transformation towards associated radical socialist concepts in warfare.

30. Lewis and Grimes, "Metatriangulation"; and Walid Phares, *Future Jihad: Terrorist Strategies against the West* (New York: Palgrave Macmillan Publishing, 2005). Phares offers some framework on the doomsday outlook that some Islamic groups profess. Applying the Burrell and Morgan framework here adds additional value.

31. Gioia and Pitre, "Multiparadigm Perspectives," 588. See also Peter Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (New York: Anchor Books, 1967), 5–15; Hayden White, *Tropics of Discourse: Essays in Cultural Criticism* (Baltimore: Johns Hopkins University Press, 1978), 6; and Baudrillard, *Simulacra and Simulation*, 152–53.

32. Karl Weick, "The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster," *Administrative Science Quarterly* 38, no. 4 (1993): 628–52; Weick, "The Role of Imagination in the Organizing of Knowledge," *European Journal of Information Systems* 15 (2006): 446–52; Weick, "Drop Your Tools: An Allegory for Organizational Studies," *Administrative Science Quarterly* 41 (1996): 301–13; Weick and Karlene Roberts, "Collective Mind in Organizations: Heedful Interrelating on Flight Decks," *Administrative Science Quarterly* 38, no. 3 (September 1993): 357–81; Donald Schon, "Generative Metaphor: A Perspective on Problem-Setting in Social Policy," in *Metaphor and Thought*, ed. Andrew Ortony, 2nd ed. (Cambridge, UK: Cambridge University Press, 1993), 137–63; Schon, "Educating the Reflective Legal Practitioner," *Clinical Law Review* 2, no. 231 (1992): 231–50; and Clifford Geertz, "Deep Play: Notes on the Balinese Cockfight," *Daedalus* 134, no. 4 (Fall 2005): 56–86. Geertz's work is added here as a complementary study in anthropology that holds an interpretivist outlook.

33. Geertz, "Deep Play"; Linda Putnam and Michael Pacanowsky, eds., *Communication and Organizations: An Interpretive Approach*, Sage Focus ed. (Beverly Hills: Sage Publications, 1983); Paul Jeffcutt, "From Interpretation to Representation in Organizational Analysis: Postmodernism, Ethnography and Organizational Symbolism," *Organizational Studies* 15, no. 2 (1994): 241–74; Nick Turnbull, "Interpretivism and Practice in Governance Studies: The Critique of Methodological Institutionalism," *British Politics* 6, no. 2 (2011): 252–64; and Karl Weick, "Organizational Communication: Towards a Research Agenda," in Putnam and Pacanowsky, *Communication and Organizations*, 13–30. Geertz offers an interpretivist approach to what is an anthropological study while Putnam and Pacanowsky edit an interpretivist approach to communication and organizational theory. Jeffcutt approaches postmodernism with interpretivism, and Turnbull critiques governmental applications through an interpretivist lens. Weick

moves along a similar interpretivist path as the aforementioned researchers in his "Organizational Communication" piece.

34. Clarke-Hill, Li, and Davies, "Paradox of Co-operation and Competition," 18.

35. United States Army Center for Military History (CMH) Publication 105-1-1, *The U.S. Army Chief of Staff's Professional Reading List*, 2014, accessed 28 February 2015, http://www.history.army.mil/html/books/105/105-1-1/CMH_Pub_105-1-1_2011.pdf. For additional analysis on the dominance of objective, analytical, and scientific-based focuses by military organizations, see Bousquet, *Scientific Way of Warfare*, 60; Bousquet, "Cyberneticizing the American War Machine: Science and Computers in the Cold War," *Cold War History* 8, no. 1 (January 2008): 90; and John L. Romjue, *American Army Doctrine for the Post-Cold War* (Fort Monroe, VA: Military History Office, United States Army Training and Doctrine Command, 1997), 11. See also Bousquet, *Scientific Way of Warfare*, 128–29; and Aaron Jackson, *The Roots of Military Doctrine: Change and Continuity in Understanding the Practice of Warfare* (Fort Leavenworth, KS: Combat Studies Institute Press, 2013), 52–53.

36. Christopher Paparone and William Davis Jr., "Exploring Outside the Tropics of Clausewitz: Our Slavish Anchoring to an Archaic Metaphor," in *Addressing the Fog of the COG: Perspectives on the Center of Gravity in US Military Doctrine*, ed. Celestino Perez (Fort Leavenworth, KS: Combat Studies Institute Press, 2012), 66–69. See also Phillip Pattee, "Center of Gravity: Right Idea, Wrong Direction," in Perez, *Addressing the Fog of COG*, 124–25; and Beyerchen, "Unpredictability of War," 62. Beyerchen breaks from others and attempts to make a nonlinear functionalist (complexity theory) argument reinterpreting Clausewitz. Olson, "Continuing Irrelevance of Clausewitz"; and Joseph Strange and Richard Iron, "Center of Gravity: What Clausewitz Really Meant," *Joint Force Quarterly* issue 35 (2004): 25.

37. The following works challenge the dominance of Clausewitz in different approaches: Paparone and Davis, "Exploring Outside the Tropics of Clausewitz"; Olson, "Continuing Irrelevance of Clausewitz"; and Ben Zweibelson, "An Awkward Tango: Pairing Traditional Military Planning to Design and Why It Currently Fails to Work," *Journal of Military and Strategic Studies* 16, no. 1 (2015): 11–41.

38. Haridimos Tsoukas, "The Missing Link: A Transformational View of Metaphors in Organizational Science," *Academy of Management Review* 16, no. 3 (1991): 571. See also Max Esade and Bill McKelvey, "Integrating Modernist and Postmodernist Perspectives on Organizations: A Complexity Science Bridge," *Academy of Management Review* 35, no. 3 (2010): 418.

39. Johnathan Johnson and Brian Burton, "Chaos and Complexity Theory for Management," *Journal of Management Inquiry* 3 (1994): 328.

40. See "Air Force Chief of Staff Reading List, 2014," accessed 16 March 2016, http://static.dma.mil/usaf/csafreadinglist_2014/03_books.html.

41. The term *transdisciplinary* is distinct from *interdisciplinary* or *multidisciplinary*. A multidisciplinary approach would feature professionals using different disciplines collectively, but the transdisciplinary approach requires each professional to acknowledge alternative perspectives by employing the language, symbols, metaphors, and concepts of other disciplines outside their specialty to gain deeper group appreciation.

42. Tsoukas, *Complex Knowledge*, 172.

43. Schultz and Hatch, "Living with Multiple Paradigms," 530–33. See also Lewis and Kelemen, "Multiparadigm Inquiry," 252; Lewis and Grimes, "Metatriangulation," 673–75.

44. Klaus Krippendorff, "Principles of Design and a Trajectory of Artificiality," *Journal of Product Innovation Management* 28 (2011): 417.

45. Kuhn, *Structure of Scientific Revolutions*, 147–50. See also Burrell and Morgan, *Sociological Paradigms and Organisational Analysis*; Gioia and Pitre, "Multiparadigm Perspectives," 584–86; and Weaver and Gioia, "Paradigms Lost," 567–69.

46. Damian Popolo, "French Philosophy, Complexity, and Scientific Epistemology: Moving beyond the Modern 'Episteme,'" *Emergence* 5, no. 1 (2003): 86. See also Bousquet, "Cyberneticizing the American War Machine," 90.

47. Karl Weick, "Reflections: Change Agents as Change Poets—On Reconnecting Flux and Hunches," *Journal of Change Management* 11, no. 1 (March 2011): 16–17. See also Paul Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge, MA: MIT Press, 1996), 127–28. Edwards quotes Robert McNamara famously demanding data and trivializing nonanalytic perspectives (poetics) during the Vietnam War period.

48. Baudrillard, *Simulacra and Simulation*.

49. Zweibelson, "Preferring Copies with No Originals." The author employs Baudrillard's book to convey the military practice of simulacra in training and education.
50. Rancière, *Ignorant Schoolmaster*.
51. Zweibelson, "Ignorant Counterinsurgent." The author employs Rancière's book to explain military educational and counterinsurgent practices within a largely radical humanist approach while also incorporating functionalism.
52. Deleuze and Guattari, *Thousand Plateaus*.
53. Chuck Palahniuk, *Fight Club* (New York: W. W. Norton, 17 October 2005).
54. Liang and Xiangsui, *Unrestricted Warfare*.
55. Anatol Rapoport, ed., "Editor's Introduction to *On War*," in Carl Von Clausewitz, *On War* (New York: Penguin Books, 1968).
56. Raphael Patai, *The Arab Mind*, rev. ed. (New York: Hatherleigh Press, 2007).
57. Sayyid Qutb, *Ma'ālim fī al-Tarīq* (Rām Allāh: Dār al-Kutub al-Thaqāfiyah, [1987?]).
58. Esade and McKelvey, "Integrating Modernist and Postmodernist Perspectives," 429.
59. Popolo, "Moving beyond the Modern 'Episteme,'" 78.
60. Weick, "Reflections," 17. Weick uses the term *change poet* for what interpretivists perform for organizational development through subjective inquiry and exploration.
61. White, *Content of the Form*.
62. Berger and Luckmann, *Social Construction of Reality*, 59.
63. Paul Ricoeur, *Time and Narrative*, trans. Kathleen McLaughlin and David Pellauer, vol. 1 (Chicago: University of Chicago Press, 1983).
64. *Ibid.*, 78.
65. Douglas Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid* (New York: Basic Books, 1979).
66. Nassim Nicholas Taleb, *The Black Swan* (New York: Random House, 2007), 69.
67. Tsoukas, *Complex Knowledge*; and Bousquet, *Scientific Way of Warfare*.
68. Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore: John Hopkins University Press, 1989).
69. Ahl and Allen, *Hierarchy Theory*, 1. See also Fritjof Capra, *The Web of Life* (New York: Anchor Books, 1996), 29; and Taleb, *Black Swan*, 16. These authors charge that human efforts to categorize and reduce complexity into components miss the overarching nature of complexity.



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